



AU9879900

(12) PATENT ABRIDGMENT (11) Document No. **AU-B-79900/98**
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. **760083**

- (54) Title
ENHANCEMENT PHALLOPLASTY
- (51)⁶ International Patent Classification(s)
A61F 002/26 A61B 017/00 A61F 005/41
- (21) Application No. : **79900/98** (22) Application Date : **12.08.98**
- (30) Priority Data
- (31) Number (32) Date (33) Country
PO8527 13.08.97 AU AUSTRALIA
- (43) Publication Date : **25.02.99**
- (44) Publication Date of Accepted Application : **08.05.03**
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- (56) Prior Art Documents
US 5518499
US 4532920
- (57) Claim

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AUSTRALIA

Patents Act 1990

COMPLETE SPECIFICATION
STANDARD PATENT

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NUMBER: PO 8527/97
FILING DATE: 13/ 8/1997

Invention Title: ENHANCEMENT PHALLOPLASTY

The following statement is a full description of this invention,
including the best method of performing it known to me/us:

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ENHANCEMENT PHALLOPLASTY

This invention relates to enhancement phalloplasty, which is a surgical procedure to modify the human penis, normally by increasing the length of or widening the penis.

BACKGROUND

There are several reasons for persons requiring operations of this type. The first is for persons who are born with small penises. These persons can often believe that they are the subject of derision and ridicule and the lack of size of the appendage can be emotionally very difficult for them.

A second is where persons, either for personal pleasure or for professional reasons, such as strip-tease dancers, actors and the like, wish to be seen to have a large penis.

There have been previously proposed methods of enhancement phalloplasty. Historically many of these have not been fully successful. I have described in my Patent Application No 53864/98 dated February 11, 1998 certain techniques, particularly for the lengthening and widening of penises and these have been very satisfactory in their application.

The object of the present invention is to provide a method of lengthening the penis of a person who has, or is to have an artificial erection device in the penis.

A further object of the invention is to provide methods of



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enhancement phalloplasty which provide satisfactory results and which are safe procedures.

BRIEF DESCRIPTION OF INVENTION

Accordingly, in one broad form of the invention there is provided a method of enhancement phalloplasty of a human penis in patients who are about to have or already have in place an artificial erection device; said penis having a structure including a first corpus cavernosum, a second corpus cavernosum, a corpus spongiosum, a Buck's fascia and a dorsal neurovascular bundle; said method including the steps of degloving the penis to expose the Buck's fascia; freeing the dorsal neurovascular bundle and separating the corpus spongiosum from the inferior surface of both said first and said second corpus cavernosum; dividing said first and second corpus cavernosum circumferentially.

Preferably said step of separating the corpus spongiosum from the inferior surface of both said first and said second corpus cavernosum comprises a dissection so as to enable the first and second corpus cavernosum to be elongated without dividing the corpus spongiosum.

Preferably in the case where said artificial erection device comprises a corporal cylinder which is longer than the corporal cylinder presently in place, said method further



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including the step of substituting a longer corporal cylinder for said corporal cylinder.

Preferably the increase in length of the longer corporal cylinder is of the order of one or more cm.

Preferably a gap formed in the first or second corpus cavernosum is filled by suturing in place an inverted dermal graft from which the epidermis has been removed.

Preferably an inner most surface comprising a dermo epidermal surface of said inverted dermal graft is applied to a cavity of said first or second corpus cavernosum.

Preferably where widening of the penis is also required widening is effected by using a dermal fat graft.

Preferably the fat graft is sutured to the exposed Bucks fascia and when the graft reaches a defect in the Buck's fascia corresponding to the division of the first or second corpus cavernosum the edges of the graft are sutured to the Buck's fascia circumferentially and to a distal portion of the first or second corpus cavernosum without dividing the graft as a separate phenomenon.

Preferably if the patient has a very thickened wall of the first or second corpus cavernosum, a first dermal fat graft is placed into the defect in the Buck's fascia and then a second dermal fat graft is placed into said defect.

Preferably if the patient has a very thickened wall of the



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corpus cavernosum, the gap in the wall of the corpus cavernosum is filled by using a gortex graft, a saphenous or other vein patch, temporalis or other fascia such as the fascia lata or dexion mesh or silastic sheeting or other appropriate material and then said second dermal fat graft is applied.

Preferably the method includes an additional step wherein the penis is reduced and proximal wounds in said penis are trimmed and closed in layers.

The particular application to which the procedure specifically relates is to penile lengthening in patients who are about to have or already have in place an artificial erection device either of the inflatable or solid rod type as treatment for their impotence and who require additional penile lengthening and/or widening.

In association with the method of the invention, I can also apply the lengthening and widening techniques described in my earlier patent application, and I shall refer to these as though the specification of that earlier application is part of this specification.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The dissection involves separating the corpus spongiosum from the inferior surface of both corpora cavernosa. Additional length of 1cm or more in the length of the corpus cavernosum can



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be obtained by this technique and so it will be necessary to either put a 1cm longer corporal cylinder than has already been in place or a 1cm longer cylinder than has been measured at the earlier part of the procedure when the corporotomy and dilatation of the corpus was performed. The gap in the corpus cavernosum is filled by suturing in place an inverted dermal graft from which the epidermis has been removed so that the dermo epidermal surface is the inner most surface applied to the corporal cavity.

Suturing is achieved using a continuous non-absorbable suture of the gortex type and suturing is performed over the deflated corporal cylinder (in the case of inflatable cylinders) or over the rigid non-inflatable intra corporal rod if this has been used.

If widening using a dermal fat graft is also desired then the dermal fat graft is sutured in place generally as described in my earlier patent application but when the graft reaches the defect in Buck's fascia corresponding to the division of the corpus cavernosum the edges of the graft are sutured to this circumferentially and to the distal portion of the corpus cavernosum without dividing the graft as a separate phenomenon. However in those patients in whom there is a very thickened wall of the corpus cavernosum a better result can be achieved by putting a separate dermal graft into the defect and then



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applying another dermal fat graft more superficially to that as described in my earlier application. The same result can be achieved by filling the gap in the wall of the corpus cavernosum by using a gortex graft, a saphenous or other vein patch, temporalis or other fascia such as the fascia lata. Even substances such as dextron mesh or silastic sheeting are also theoretically possible.

In order that the invention may be more readily understood, I will describe one particular operation in which the use of the invention is demonstrated.

This operation may be combined with penile lengthening or lengthening and widening as described in my earlier patent application or it may be performed alone. It should also be noted that the artificial erection device can be put in by the classic infrapubic or penoscrotal technique. If the latter is used it will be necessary to perform the penile lengthening by dividing the suspensory ligament having approached it by a vertical infrapubic incision (suprapubic incision).

Once the suspensory ligament of the penis and the deep stay sutures have been inserted as described above then the artificial erection device is inserted as per the classical description of the operation via the infrapubic or penoscrotal route as described widely in the general urological and surgical literature. Since additional length in the corpora cavernosa



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will be achieved by the technique of corporal division which is described hereinafter, the length of the corporal cylinder chosen for the artificial erection device should be 1cm longer than that already measured for the insertion of that device. If the device has previously been inserted at a previous operation then it will be necessary to reopen the corporal cylinder and either attach a further 1cm rear tip extender or put in the same number of rear tip extenders as put in at the previous operation and add a 1cm longer cylinder which must be new or some combination of those two possible techniques.

Once the artificial erection device is in place the penis is degloved, the artificial erection device fully inflated and the dorsal neurovascular bundle of the penis on either side of the midline dissected free from an area approximately 2cm proximal to the coronal groove. This dissection is carried proximally and distally for 1cm so that the entire area of mobilisation is at least 2cm long. At the midpoint of this dissection the underlying corpus cavernosum on either side is incised and that incision is carried around medially in the midline or laterally around to the junction with the corpus spongiosum. This latter structure is then carefully dissected away from the corpus cavernosum so that it is separated intact over an area of approximately 1cm. The division of the corpus cavernosum is then completed. The artificial erection device is



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then fully inflated and maximum separation of the corpus cavernosa is achieved. At this stage a dermal graft taken from the original site of dermal fat graft donor area is stripped of its fat and sutured in the circumferential manner to the free margins of the corpus cavernosum using a continuous non-absorbable suture such as 20 Gortex. When the wall of the corpus cavernosum is quite thin and when widening of the shaft of the penis is also being simultaneously achieved using a dermal fat graft a separate dermal graft to fill this defect is not necessary and the deep layers of the dermal fat graft can be sutured to the free edges of the corpus cavernosum instead. During the suturing process it is both important and more convenient for the artificial erection device to be deflated thereby minimising the risk of perforation of that device with the needle during the suturing process.

At this stage the degloved penis is then reduced, the distal penile skin incision is closed with a running absorbable suture, the deep stay sutures in the infrapubic region are tied, the proximal wounds are trimmed and closed in layers and dressings are applied.

If the artificial erection device has been in place for some time it is then inflated and left inflated for 24 hours. Dressings are then applied. If the artificial erection device has been put in at the time of surgery as a new device then it



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is left deflated and a tight circumferential penile dressing applied.

Whilst I have described herein a specific embodiment of the concept of the present invention it is to be understood that variations can be made in this within the ambit of the invention.



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The claims defining the invention are as follows:

1. A method of enhancement phalloplasty of a human penis in patients who are about to have or already have in place an artificial erection device; said penis having a structure including a first corpus cavernosum, a second corpus cavernosum, a corpus spongiosum, a Buck's fascia and a dorsal neurovascular bundle; said method including the steps of degloving the penis to expose the Buck's fascia; freeing the dorsal neurovascular bundle and separating the corpus spongiosum from the inferior surface of both said first and said second corpus cavernosum; dividing said first and second corpus cavernosum circumferentially.
2. The method as claimed in claim 1 wherein said step of separating the corpus spongiosum from the inferior surface of both said first and said second corpus cavernosum comprises a dissection so as to enable the first and second corpus cavernosum to be elongated without dividing the corpus spongiosum.
3. The method as claimed in claim 1 or claim 2 wherein in the case where said artificial erection device comprises a corporal cylinder which is longer than the corporal cylinder presently in place, said method further including the step of substituting a longer corporal cylinder for said corporal cylinder.



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4. A method as claimed in claim 3 wherein increase in length of the longer corporal cylinder is of the order of one or more cm.
5. A method as claimed in any preceding claim wherein a gap formed in the first or second corpus cavernosum is filled by suturing in place an inverted dermal graft from which the epidermis has been removed.
6. A method as claimed in claim 5 wherein an inner most surface comprising a dermo epidermal surface of said inverted dermal graft is applied to a cavity of said first or second corpus cavernosum.
7. A method of enhancement phalloplasty as claimed in any preceding claim wherein widening of the penis is also required and wherein widening is effected by using a dermal fat graft.
8. The method of claim 7 wherein the fat graft is sutured to the exposed Bucks fascia and when the graft reaches a defect in the Buck's fascia corresponding to the division of the first or second corpus cavernosum the edges of the graft are sutured to the Buck's fascia circumferentially and to a distal portion of the first or second corpus cavernosum without dividing the graft as a separate phenomenon.
9. A method of enhancement phalloplasty as claimed in claim 8



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- wherein if the patient has a very thickened wall of the first or second corpus cavernosum, a first dermal fat graft is placed into the defect in the Buck's fascia and then a second dermal fat graft is placed into said defect.
10. A method of enhancement phalloplasty as claimed in claim 9 wherein if the patient has a very thickened wall of the corpus cavernosum, the gap in the wall of the corpus cavernosum is filled by using a gortex graft, a saphenous or other vein patch, temporalis or other fascia such as the fascia lata or dextron mesh or silastic sheeting or other appropriate material and then said second dermal fat graft is applied.
11. A method as claimed in any preceding claim further including an additional step wherein the penis is reduced and proximal wounds in said penis are trimmed and closed in layers.
12. A method of enhancement phalloplasty substantially as hereinbefore described with reference to the example of the particular operation given in the specification.

Dated this 4th day of March 2003

Colin Campbell Marshall Moore
By his Patent Attorneys
WALLINGTON-DUMMER



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ABSTRACT

A method of enhancement phalloplasty of a human penis specifically for persons who have an artificial erection device including the steps of degloving the penis to expose Buck's fascia and dividing the corpora cavernosa circumferentially after freeing the dorsal neurovascular bundle and separating the corpus spongiosum from the inferior surface of both corpora cavernosa. The dissection involves separating the corpus spongiosum from the inferior surface of both corpora cavernosa.

The method can be used in association with a system of dermal fat grafts so that the width of the penis can also be modified.

